



ANNUAL REPORT

OF THE

Antigua Agricultural Department

(LEEWARD ISLANDS COLONY)

FOR THE YEAR

1953.

—
ANTIGUA.

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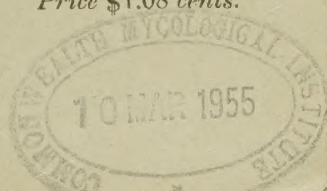


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STAFF as at 31st December, 1953.

Agricultural Superintendent	...	...	E. R. H. MARTIN, D.I.C.T.A.
Veterinary Officer	...	...	L. A. THOMAS, D.V.M., V.S.
Assist. Agricultural Superintendent	...	...	Vacant
Agric. Assistant IIIA	...	...	Vacant

Friar's Hill Station

Manager	...	...	R. L. V. HALL
Farm Foreman	...	...	R. FRANCIS

Marketing & Credit

Marketing Officer	...	...	L. M. F. PARRIS
Principal (Accountant)	...	...	MC. C. GEORGE, LL.B.
Agric. Assist. IIIB	...	...	R. V. CAMACHO (<i>seconded as Fisheries Officer</i>)

Land Settlements

Agric. Assistant II (L. S. Officer)	...	...	V. G. PEREIRA
Agric. Assistant II (Credit)	...	...	C. E. GREENAWAY
Agric. Assistant IIIA	...	...	E. ROBERTS
			J. M. A. EDWARDS
Agric. Assistant IIIB	...	...	D. S. LEWIS
			C. E. WINTER
			E. C. SCHOUTEN
			R. A. ARRINDELL
Agric. Assistant IV	...	...	L. HODGE
			C. WALSH
			T. JOSEPH
			J. M. BAILEY
			Vacant

Protection Service

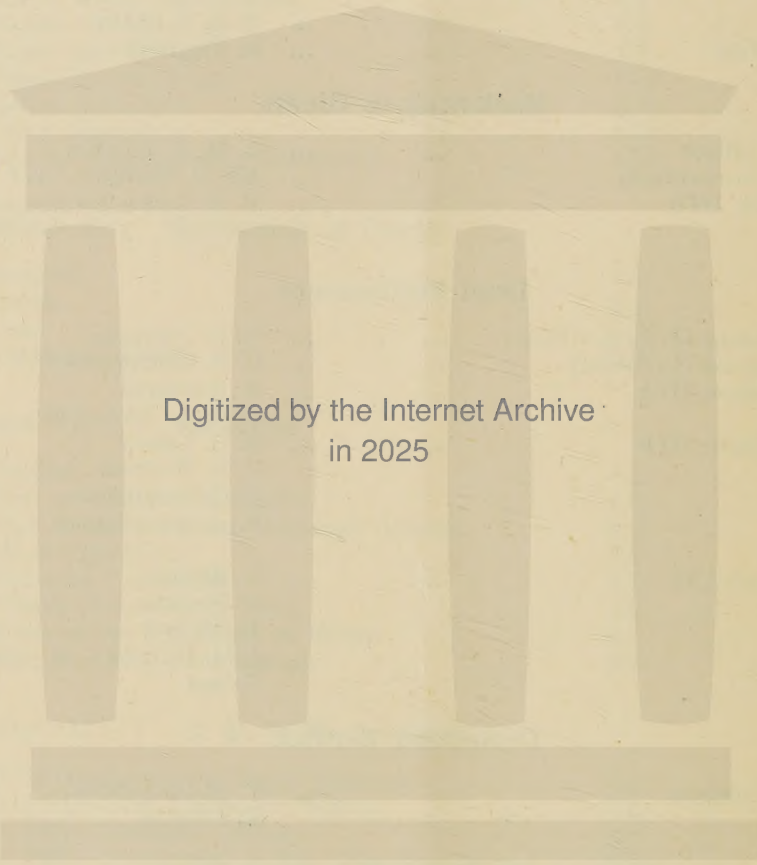
Protection Officers	...	...	P. BLANCHETTE
			K. PIGOTT

Greencastle Nursery & Fruit Farm

Curator	...	...	C. A. GOMEZ
Assistant Curator (Temporary)	...	...	F. MARGETSON
P. O. II (Foreman)	...	...	R. E. M. WHYTE

Fisheries

Fisheries Officer	...	...	R. V. CAMACHO (<i>seconded from Agric. Assist. IIIB Marketing & Credit</i>)
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Section I

REVIEW OF AGRICULTURAL PRODUCTION

(A) ANTIGUA

(Population approximately 47,000).

1.1. WEATHER. The average rainfall recorded from 43 stations was 28.29 inches and was 14.95 inches below the average (43.24 inches) for the period 1933—1953.

The lowest fall (12.99 ins.) was recorded at Wallings in the southern part of the island and which is usually considered to be a relatively wet area.

The highest fall (42.41 ins.) was recorded at the Antigua Sugar Factory in the north-eastern part of the island.

In the recorded rainfall history of the island since 1874, the year 1953 was a year of intense drought second only to 1930 when only 25.51 inches were measured.

In 1939, rainfall was only 29.70 inches and up to the end of September it was a drier year than 1953. In 1939 however, there were heavy rains in October whereas in 1953, the drought broke only in the second part of November, and that with only moderately heavy rains. From the point of filling surface catchments (which includes ponds for the watering of livestock), these showers were for the most part inadequate.

There were no tropical disturbances during the year.

Appendix I shows total annual rainfalls for the years 1874 to 1932.

Appendix II shows average monthly rainfall from 1933 to 1953.

Appendix III shows progressive monthly average rainfall for the years 1933—1953.

Appendix IV shows details of monthly rainfall throughout the island for 1953.

Table I.
Barometer Readings

<i>Month</i>		(Inches of Mercury)		<i>Average</i>
		<i>a. m.</i>	<i>p. m.</i>	
January	...	30.00	30.01	
February	...	30.11	30.07	
March	...	30.05	29.98	
April	...	29.97	29.91	
May	...	29.96	29.92	
June	...	30.03	30.00	
July	...	30.04	30.02	
August	...	30.03	29.99	
September	...	29.91	29.89	
October	...	29.92	29.88	
November	...	29.91	29.89	
December	...	29.97	29.99	

(NOTE: The above averages were compiled from readings taken by Mr. V. Griffith in St. John's at 7.30 a.m. and 5.00 p.m. and kindly supplied by him).

The lowest reading recorded was 29.71 inches at 5.00 p.m. on September 3rd and the highest was 30.12 inches at 7.30 a.m. on August 2nd and 3rd.

Temperatures recorded at the Central Cotton Station varied from mean maxima of 87.4° F in October and 79.8° F in January to mean minima of 77.0° F in May and 69.8° F in November.

Average hours of sunshine varied from 9.7 hours in August to 7.4 hours in November.

(NOTE: The above data from the Central Cotton Station have been made available for this report through the courtesy of the Cotton Officer of the B. W. I.).

1.2. SUGAR. The Antigua Sugar Factory Limited produced 31,588 long tons grey crystals and 1,249,370 gallons final molasses from 245,111 tons of cane ground.

The crop was started on February 2nd and was finished on August 6th. The quality of the cane was the best it has been since 1946 and approximately $\frac{3}{4}$ of a ton less cane was needed to produce a ton of sugar than in 1952.

Labour relations during the year were satisfactory.

Montpelier Factory produced 530 long tons of Muscovado sugar, 70,522 gallons of molasses and 1,250 gallons syrup from 7,545 tons of cane ground.

Approximations of the percentages of different varieties reaped in 1952 and 1953 are as follows:—

Table II.

<i>Variety</i>	1952	1953
B4098	64.58	75.01
B37161	24.81	17.37
B3439	3.54	3.80
B34104	2.75	1.20
B37172	4.00	1.23
Others	.32	1.39
	100.00	100.00

The Ministry of Food's quota for the Antigua Sugar Factory amounted to 25,121 tons for which a negotiated price of \$203.20 per ton (which included \$13.20 per ton to be held by the Government of Antigua for Price Stabilisation, Rehabilitation and Labour Welfare) was paid.

In addition, 3,560 tons were sold on the open market for about £8 per ton less.

1,208,710 gallons of molasses valued at \$54,392 were exported, the remainder being sold locally.

The Montpelier Factory exported its entire production of 530 tons Muscovado at \$198.25 per ton.

11,964 gallons of molasses valued at \$9,317 were also exported, the remainder of the molasses as well as the syrup being used locally by the Antigua Distillery Ltd. for the manufacture of rum.

The Antigua Sugar Factory Ltd. paid non-contracting suppliers of cane a total of £2. 16s. 5d. (\$13.54) per ton and contractors, including contracting Peasant Settlements, a total of £2. 19s. 11d. (\$14.38) per ton of cane.

The approximate area reaped in 1953 was 12,650 acres and the area estimated to be reaped in 1954 is 11,750 acres.

Sugar production in 1954 was estimated at the end of 1953 to be 14,000 tons grey crystals and 240 tons muscovado.

Table III gives some comparative statistics concerning 1953 and the previous 10 year period. More details are given in Appendix V.

Table III

	1953	Previous ten years		
		Average	Highest	Lowest
Acreage reaped ...	12,825	9,951	12,669 (1940)	8,525 (1944)
Total tons sugar ...	32,118	22,037	34,246 (1952)	12,525 (1948)
Tons cane per acre ...	19.70	17.05	23.90 (1952)	9.80 (1940)
Tons cane per ton sugar ...	7.86	8.20	9.20 (1951)	7.15 (1945)
Tons sugar per acre ...	2.50	2.14	2.75 (1952)	1.10 (1940)

1.3. COTTON. The 1952—53 crop was reaped from approximately 1,300 acres as compared with 3,906 acres for the previous crop.

Production was 277,204 lbs. clean lint of which 238,312 lbs. was M. S. I. and 38,892 lbs. was V. H. 8. Stained lint was approximately 7,986 lbs.

Table IV.

	1953.	Previous ten years		
		Average.	Highest.	Lowest.
Acreage reaped ...	1,300	2,412	4,826 (1940—41)	498 (1946—47)
Production clean lint in lbs. ...	277,204	426,512	873,564 (1948—49)	73,530 (1942—43)
Approximate Stains (lbs.) ...	7,986	...	...	...
Total production in lbs. ...	285,190	...	...	...
Yield per acre (lbs. clean lint) ...	213	168	253 (1945—46)	82 (1942—43)
Average price per lb. clean lint f.o.b. ...	\$0.7864	\$0.6243	\$1.113 (1950—51)	\$0.38 (1945—46)
Price paid for lb. clean seed cotton ...	\$0.214	...	...	...
Total value lint exported* ...	\$221,506.74	\$318,278.46	\$761,926.00 (1950—51)	\$35,300.00 (1942—43)

Clean lint \$217,992.90. Stains \$3,513.84.

Table V.
Cotton Grading
(NUMBER OF BALES)

Season.	M. S. I. Grades											
	G1	G2x	G2	G3x	G3	G3 ss	G4x	G4	G5x	G5	G6	Total
1948—49	48	146	392	310	1053	193	442	279	2	5	1	2,871
1949—50	27	118	254	484	1135	—	92	230	7	17	—	2,164
1950—51	240	275	1066	329	585	—	49	65	7	1	—	2,617
1951—52	78	252	513	288	324	—	24	74	4	3	—	1,560
1952—53	23	52	621	33	39	—	4	1	—	—	—	773

SS—Short staple.

V. H. 8 Grades.

<i>Season</i>	<i>V/S.</i>		<i>S.P. 1.</i>		<i>S.P. 2.</i>		<i>S.P. 3.</i>		<i>Total</i>	
1950—51	...	1	18		3		1		23	
	<i>MG1x</i>	<i>MG1</i>	<i>MG2x</i>	<i>MG2</i>	<i>MG3x</i>	<i>MG3</i>	<i>MG4x</i>	<i>MG4</i>	<i>MG5x</i>	<i>Total</i>
1951—52	2	62	55	63	70	30	14	4	1	301
1952—53	1	—	11	91	15	7	—	—	—	125

The Agricultural Department continued to be the sole purchaser of seed cotton and to exercise supervision of all cotton going to the gins.

The entire crop of clean lint was sold to the Raw Cotton Commission at prices ranging from 74c. to 80c. per lb. for the M. S. I. variety and from 80c. to 90. per lb. for V. H. S.

Stained lint was sold to Martinique at 44c. per lb.

Seed was sold (mainly to Montserrat for crushing) at \$48.00 per ton ex ginnery.

1953—54 CROP. Up to the time of planting, no acceptable price offers had been received for the 1953—54 crop.

In an effort therefore to maintain the industry at a reasonably high level however, Government decided to offer to purchase seed cotton at a first payment of 14c. per lb. which was the same as made in respect of the previous crop.

It was further decided that the main crop should be M. S. I. and that this should be the only variety planted by peasants. In order to maintain supplies of V. H. 8. seed for planting, should the demand for this cotton increase, estates were asked to plant in excess of 100 acres of this variety, which was accordingly done. The reasons for selecting estates for this purpose rather than peasants were largely technical.

Owing to an extremely prolonged dry season which broke only towards the latter part of November, the bulk of the crop was planted late, the planting season being extended to as late as 15th November. Certain estates however planted more or less on the first day of the planting season (August 16th) and were fortunate in obtaining sufficient rain to ensure a good start. Growth in some instances on these estates has been extremely good.

The prices finally accepted for clean lint were 84c. for grade 1 M. S. I. and 94c. for grade 1 V. H. 8., both with 1c. differentials.

2,861 acres were registered as being planted, and estimates to the end of the year indicated production of the order of 600 bales of 400 lbs. each.

Eleven meetings of the Board of Management of the Antigua Cotton Growers Association were held during the year and there were also four General Meetings.

The Ordinary General Meeting of the West Indian Sea Island Cotton Association was held in Antigua in December.

1.4. FOOD PRODUCTION. The unusually dry conditions which existed during the year resulted in extremely little local food being grown. Most of the fresh vegetables available in the markets were in fact imported from neighbouring islands.

Towards the latter part of the year, there was a special appeal to all growers to avail themselves of the late rains to plant as large an acreage as possible in food. This was also in recognition of the fact that the staple crops for reaping in 1954 were already partly doomed to failure. In general, the appeal met with fair success. Government committed itself to purchase a large variety of food crops so as to protect growers against financial loss in the event of over-production and sharp drop in prices in the local market.

ONIONS. Nurseries of Yellow Bermuda and Crystal White Wax Onions were planted at Friar's Hill and Greencastle. It is estimated that 15 to 20 acres of onions were planted from these, including about 8 acres on estates.

It is interesting to note that at Friar's Hill, the seed was sown in mid September. There was not sufficient moisture in the soil to germinate them until the middle of November when it was found that, despite the long period of exposure, germination was excellent. The crop was estimated to yield from 110,000 lbs. to 130,000 lbs.

Provided remunerative markets are available for onions, it is considered that this crop offers considerable promise as a secondary industry. Markets in the Caribbean have however not been very encouraging recently as regards price.

The development of the Greencastle Station, mentioned in greater detail later in this Report has added considerably to the availability of seedlings to the public. Friar's Hill has continued work in this direction.

Fair quantities of fresh vegetables have also been grown at Greencastle, for which ready sale has been found.

VETERINARY REPORT.

BOVINE TUBERCULOSIS.

During the year, Milk Production Order No. 50 of 1950 was revoked. The dairies previously under supervision however were tuberculin tested.

A survey to determine the incidence of tuberculosis was started towards the end of the year. 614 animals were tested of which 14 gave a positive reading (2.28% reactors). It is proposed to extend the survey in 1954.

BRUCELLOSIS.

In conjunction with the Medical Department, plans were made to carry out a survey on man and animals to determine the incidence of Brucellosis, and to adopt control measures if necessary.

A few tests were carried out all with negative results.

It is proposed to commence the survey in 1954.

PYROPLASMOSIS.

Two cases were diagnosed this year and treated. Treatment consisted of:—

subcutaneous injection of "Babesan" (6.6 diquinolylurea dimethosulphate) at the rate of 1 c.c. of a 5% solution per cwt. body weight.

Supportative treatment:—

3000 c.c. of 5% Dextrose saline intravenously.
Hæmatenic Tonic.

Both cases made a complete recovery.

PARASITISM.

Ectoparasitic Control—Five dipping tanks were adequately maintained during the year. Coopers cattle dip was used. (Arsenical base diluted 1 part to 150 parts water). The animals were dipped at 14 day intervals. Between 800 and 900 animals were treated in this way. Regular dipping kept the animals tick free throughout the year. (*Boophilus* spp. most prevalent).

Endoparasitic Control—Three herds were under observation during the year and their case histories are as follows:—

HERD 1. 80 sheep (all ages inclusive)

History: The owner reported that his animals were all in poor condition although he increased their ration. Several deaths had occurred and some of the remainder had swellings under the jaw.

Symptoms: The herd exhibited signs of varying degrees of parasitism—emaciation, anaemia, diarrhoea and submaxillary oedema.

Post Mortem Findings: Subcutaneous oedema, anaemia, chronic gastroenteritis *Monezia* spp. in intestines.

Diagnosis: Parasitism caused by Tape Worms (*Monezia* spp.)

Treatment: Drenching each animal with copper sulphate and nicotine sulphate in graded doses. Repeated in three weeks; then Penothazine at intervals of three months.
Hæmatinic tonic.
Preventative measures were outlined to the owner.

HERD 2. 15 calves (ages 3 to 15 months).

History: The owner reported that his calves were suffering from a chronic persistent cough. They were in poor condition and there were occasional deaths.

Symptoms: Mucopurulent nasal discharge with symptoms of advanced parasitism (emaciation, oedema, anaemia, diarrhoea and weakness).

Post Mortem Finding: Pulmonary emphysema, secondary lobar pneumonia. *Hæmonchus* spp. in abomasum with mild abomasitis.

Diagnosis: Parasitism caused by lung and stomach worms (*Dictyocaulus* spps. and *Hæmonchus* spps.).

Treatment. Phenothiazine —divided doses on two successive days then at three weekly intervals for four doses.

Expectorant.

Hæmatinic Tonic

HERD 3. Had similar symptoms to above except that there was also a *Monezia* infestation. Treatment here started with copper sulphate and nicotine sulphate for two doses then continued with Phenothiazine.

In all these herds marked progress was made and no deaths occurred after treatment was started.

Preventative measures were outlined to owners in all cases.

MYCOTIC DERMATITIS.

Several cases were observed of a peculiar type of Mycotic Dermatitis in cattle which resembles Mange very closely.

Preliminary studies indicate that a fungus is the etiological agent. It is also believed that injuries resulting from the spines of the *Acacia Arabica* is a predisposing factor.

Varying degrees of alopecia is a common symptom.

Further studies are being carried out.

BOVINE INFERTILITY.

Investigations to determine the cause of infertility in cattle were made during the latter part of the year. Over 40 cows were examined and the following observations were made:—

1. In the majority of cases the cows had calved during the early part of the year but failed to come in heat.
2. Retained Corpora Lutea was the most common finding.
3. The manual expression of the corpus luteum re-established oestral cycle in the majority of cases, hormone therapy was used in the remainder (25—30 mg. Diethyl Stilbestrol).

4. It appears that in the majority of cases the physiological cycle of reproduction had been interrupted by nature due primarily to generally low nutritional conditions resulting from the severe drought.
5. Pregnancy diagnosis will be carried out in 1954 to evaluate this method of therapy.

POULTRY DISEASES.

In the majority of outbreaks of poultry diseases investigated, Coccidiosis and Fowl Pox were most prevalent.

Coccidiosis control was effective in all cases.

Over 80% of the outbreaks of Fowl Pox were seen in imported birds. It is proposed to commence Fowl Pox vaccination early next year.

COMMUNICABLE DISEASE CONTROL.

No cases of communicable disease occurred during the year.

A new Animals (Diseases and Importation) Ordinance based on the Jamaica Ordinance has been enacted and regulations made under the Ordinance are now in operation. The enactment of the above legislation makes it possible efficiently to control communicable animal diseases and takes us a step forward in standardising control of animal diseases in the British Caribbean.

BREEDING FOR BEEF.

From observation in isolated cases in Antigua and St. Croix, there is good reason to believe that the offspring arising from crossing Nelthropp with the Zebu matures more rapidly than either parent. In order to investigate this theory, a breeding programme is being carried out to obtain more information on the resulting crosses.

LIVESTOCK DEVELOPMENT.

Programmes for the economical development of livestock have been prepared for four areas (Coolidge Field, Greencastle, Sheriffs and Seatons) and submitted for approval. A programme for Barbuda has also been prepared and submitted.

These programmes outline measures for improvements in breeding, feeding and management and efficient utilisation of existing feed stuffs.

EXTENSION SERVICES.

Resulting from observations made on a recent visit by the Veterinary Officer and the Farm Manager to St. Croix, arrangements were made to construct a "Mud Dam" in the Red Hill area to conserve surface water for livestock as economically as possible. This work was completed, but up to the end of the year no sufficiently heavy rains occurred to fill it.

Another dam was constructed by a private individual (at the Five Islands Stock Farm) with technical assistance of the Veterinary Officer.

Proposals have been put forward for the construction of further dams in 1954.

VETERINARY ADVICE.

Several livestock owners were offered advice. In each case careful discussions were made on the factors involved. The main theme of all advice given was—improving and increasing efficiency in breeding, feeding and management—the three factors upon which the success or failure in raising livestock depends.

LEGISLATION.

The following legislation was enacted during the year:—

1. The Animals (Diseases and Importation) Ordinance No 3 of 1953.
2. The Animals (Importation) Control Regulations 1953. S. R. & O. No. 14 of 1953.

(B) BARBUDA.

1.5. No officer of the Agricultural Department is stationed there. The Agricultural Department functions in an advisory capacity only.

The following notes are extracted from the Report of the Warden, Mr. G. A. Thibou:—

RAINFALL—Total rainfall measured at Codrington for the year amounted to 34.75 inches, details of which are given in Appendix IV.

PEANUTS—The poor returns of peanuts were probably due to the heavy rains in the latter part of 1952. The crop was sold by individual producers at 30c. a pound.

SEAWEED—A sample of seaweed, known locally as "sea moss" was sent to the Institute of Seaweed Research, Midlothian, Scotland, for analysis.

It was found that it is unlikely to be able to produce an agar. On the other hand, it gives a copious viscous extract which might be of value in commerce.

CHARCOAL—The burning of charcoal continued to be one of the main means of livelihood of the inhabitants. The quantity exported was 50% more than in 1952 and the average price also had increased by nearly 50%.

COTTON—The small amount of cotton produced (873 lbs. seed cotton) was due to uncertainty in marketing conditions and also to the heavy rainfall during the last five months of 1952.

PEAS AND BEANS—Owing to dry conditions prevailing in the early part of the year, production of peas and beans was restricted. There was however every indication that these commodities would continue to be planted in quantity.

LIVESTOCK—A Jack donkey was obtained from Friar's Hill in April. A fee of one dollar per three services was charged. Thirty mares were served.

The Zebu bull ("Riley") continued to run free range.

The dilapidated condition of the catching pens was responsible for the fact that many people were unable to catch and brand their animals.

TABLE SHOWING EXPORTS FROM BARBUDA (CHIEFLY TO ANTIGUA)
DURING 1952 AND 1953.

Commodity.	Quantity.	1952.	Quantity.	1953.
		Value. \$		Value. \$
Cotton (lbs)	15,293	4,425	873	160
Charcoal (bags)	5,273	6,000	7,881	13,239
Salt (bags)	—	—	180	720
Cattle	48	4,800	44	6,600
Sheep	174	1,044	148	976
Goats	457	1,800	370	1,480
Pigs	13	400	14	520
Horses	4	160	8	300
Mules	6	1,080	7	1,050
Donkeys	25	500	45	900
Peanuts (lbs)	10,300	2,678	800	240
Peas and Beans (lbs)	—	—	6,000	1,800
Brooms (bundles)	710	1,032	552	799

Section II.

AGRICULTURAL STATIONS.

A. FRIAR'S HILL.

2.1. GENERAL. During the year, work was concentrated mainly on the establishment of 61.3 acres of plant cane and also on the maintenance of 122 acres of ratoons.

In addition, 55 acres were prepared and established early for the 1955 cane crop.

Due to dry conditions, the 16 acres prepared for cotton was established late. Despite this however, a fair yield is expected. Attacks by insects have been slight.

Clearing and general maintenance of the grazing areas has been carried out.

Fences and pipe lines were maintained in good condition, and this included the replacement of several hundred feet of piping.

All livestock were maintained in satisfactory condition.

The Station is at present supporting all the livestock of which it is fully capable, unless funds can be found to clear certain additional areas of scrub or unless a part of the area now under cultivation is reverted to pasture.

All farm buildings, with the exception of the cow shed damaged in the 1950 hurricane and not yet repaired, have been maintained in fair condition.

Labour relations during the year were satisfactory.

The very unfavourable rainfall pattern which was typical of the whole island in 1953 can be seen in the table which follows. No sufficiently heavy rains occurred at the station to fill the pond on which the farm is partly dependent for its water supply.

2.2. COMPARATIVE RAINFALL FIGURES

(INCHES)

<i>Month.</i>	<i>1949.</i>	<i>1950.</i>	<i>1951.</i>	<i>1952.</i>	<i>1953.</i>
January	1.50	5.41	3.60	2.41	1.93
February	2.07	2.52	1.88	1.60	1.02
March	5.52	1.58	1.09	1.62	5.60
April	3.54	2.44	2.16	3.14	2.06
May	1.98	2.06	10.54	3.07	1.50
June	3.35	1.66	2.74	5.74	1.31
July	2.10	1.85	3.28	8.38	3.20
August	6.66	10.71	9.18	8.43	3.15
September	10.92	6.34	12.06	5.55	2.10
October	5.85	5.13	3.90	5.19	0.85
November	2.59	4.43	3.67	5.19	5.24
December	2.98	2.64	7.36	2.03	3.41
Totals	49.06	46.77	61.46	52.35	31.37

2.3. LAND USAGE.

The following table shows the agricultural land usage for the period:—

<i>Utilisation.</i>	<i>Acreage.</i>
Cane Nurseries and Experiments	Nil
Cane (commercial)	183.00
Food crops (commercial)	1.00
Paddocks	133.21
Scrub paddocks	166.94
Vegetable garden	1.80
Fodder crops	4.05
Cotton	16.00
Hay	12.00
Fallow	30.00
Cotton Station	34.00
Prison Garden	18.00
	600.00

2.4. SUGAR CANE.

A total of 4,595 tons were harvested with an average yield of 25 tons cane per acre.

CANE HARVESTED IN 1953.

<i>Crop.</i>	<i>Acreage.</i>	<i>Tonnage reaped.</i>	<i>Yield per acre</i> <i>(tons).</i>
Plant cane	69	2,085	30.2
1st ratoons	73	1,780	24.4
Other ratoons	42	730	17.4

AREA TO BE REAPED IN 1954.

<i>Crop.</i>	<i>Acreage.</i>
Plant cane	61
1st ratoons	63
Other ratoons	59

COMPARATIVE FIGURES 1950—53.

<i>Year.</i>	<i>Acreage.</i>	<i>Tonnage.</i>	<i>Yield in tons per acre.</i>
1950*	—	583	—
1951	102	2,695	26.00
1952	156	4,253	27.26
1953	184	4,595	25.00

2.5. BUILDINGS. Minor repairs have been effected on buildings from time to time and, with some exceptions which have been reported upon separately, they are considered to be in good condition.

2.6. WATER SUPPLIES. Due to the absence of “pond rains” during the year, it is feared that the pond on the Station—which is used as the main source of water for stock—will become dry early in 1954. This will necessitate the use of well water which is not so desirable.

Much of the original iron piping was replaced during the year with new galvanised ones. Provided funds are available, it is hoped to complete this work in 1954.

2.7. FENCING. No new paddocks were built during the year. A gang of three men was however employed more or less continually on the maintenance of existing fencing.

2.8. FOOD CROPS. Owing to poor weather conditions and the continued expansion of the area planted in sugar cane, the acreage under food crops during the year was small.

No field experiments were laid down during the year.

*Reaped mainly from nurseries and experiments.

FOOD CROPS REAPED IN 1953

<i>Crop</i>	<i>Acreage</i>	<i>Yield in lbs.</i>	<i>Yield per acre in lb.</i>
Yams	... 0.25	... 600	... 2,400
Corn (Maize)	... 13.00	... 10,400	... 800

SEEDLINGS SOLD IN 1953

<i>Type</i>	<i>Number</i>
Tomato	... 34,500
Egg plant	... 50
Cabbage	... 13,000
Beet	... 4,000
Onion	... 228,300

2.9. LIVESTOCK CATTLE. Due to trying weather conditions, some of these animals lost considerable weight but, by and large, when compared with other herds in the island, they are standing up well and their condition is considered to be good.

Some calves suffering from glandular disorders were treated. They responded, but some time afterwards the condition reappeared, resulting in death. The condition appears to be associated with a calcium-phosphorus imbalance in the diet.

The breeding up of the Nelthropp herd is making favourable progress. Two heifers and one bull were born and five cows were in addition, up to end of the year, in calf.

The $\frac{3}{4}$ Red Poll $\times$ $\frac{1}{4}$ Senegal cows and heifers were bred to "Churchill" the $\frac{3}{4}$ Red Poll $\times$ $\frac{1}{4}$ Senegal bull imported from the British Virgin Islands.

No use was made of the pure Red Poll bulls by the Station during the year. One was however loaned to an approved livestock producer for some months.

It is hoped to start an experimental herd of $\frac{7}{8}$ Red Poll animals during 1954. The pure bred Red Poll bulls will be used on selected $\frac{3}{4}$ Red Poll $\times$ $\frac{1}{4}$ Senegal cows which show real hardiness.

Sales have been made during the year so that numbers do not increase above the carrying capacity of the grazing areas of the Station.

COMPLETE LACTATION FIGURES 1952—53

<i>Name of Cow.</i>	<i>Period of Lactation, From — To</i>	<i>Number of days in milk</i>	<i>Lbs. of milk produced.</i>
Dutchess	26—7—52 4—3—53	221	2,958
Ena	4—8—52 7—5—53	275	2,594
Elva	10—8—52 4—6—53	300	2,021
T. Bertha	23—8—52 28—7—53	329	5,192
T. Beryl	3—9—52 24—1—53	143	1,544
Ernie	13—9—52 28—5—53	257	1,716
Eve	28—9—52 10—10—53	377	4,080
Anna	24—11—52 19—4—53	146	1,243
Star	26—11—52 26—4—53	151	1,652
Celia	1—12—52 28—9—53	302	4,651
Diana	11—12—52 10—10—53	323	3,657
Dora	19—12—52 8—10—53	313	3,995
Deloris	2—2—53 5—12—53	306	4,978
Friars Hill	10—3—53 17—12—53	282	2,830
Frederica	21—3—53 12—11—53	236	2,976
Daphne	4—4—53 12—9—53	161	671

HORSES. The two imported French Canadian horses "Red Cap" and "Nelly" were maintained in good condition.

In order to test "Nelly's" hardiness, she was turned to pasture for some months under conditions similar to which local animals are kept. She was found to stand up very well.

Due to lack of a market and to limited grazing areas, the continued breeding of this type of animal is considered unwise and is therefore to be greatly restricted in future.

Owing to estates and the Municipal Department becoming increasingly mechanised, the wisdom of the further breeding of mules is also questionable.

DONKEYS. The pure bred Jack, "Dan Kiger", has been kept in good condition and has been used on both mares and jennys.

"Captain", the young Jack, bred at the Station, was loaned to Barbuda during the year.

SHEEP. The pure bred Persian Blackheads continue to maintain excellent condition.

In an effort to breed some grades, and also to see how many crosses are necessary before the typical markings appear, four native ewes were crossed with pure breds. The first cross did not have the typical markings but were piebald. It is intended to put the half bred ewes back to the pure bred ram to see if he will fix his markings on the second cross.

GOATS. The animals—British Alpine—continue to do well. The demand for them as milch goats is ever on the increase.

PIGS. Two Berkshire sows and one boar were maintained. These animals are costly to the Station, but were kept in an effort to help improve local breeds.

Two litters of pigs were farrowed during the year. The total number of piglets born was twelve of which three died.

NUMBER AND SEX OF ANIMALS MAINTAINED DURING THE YEAR.

Cattle.

Pure bred Red Poll Bulls	...	2
$\frac{7}{8}$ Red Poll x $\frac{1}{8}$ Senegal Bulls	...	1
$\frac{7}{8}$ " " x $\frac{1}{8}$ " Heifers	...	3
$\frac{3}{4}$ " " x $\frac{1}{4}$ " Bulls	...	11
$\frac{3}{4}$ " " x $\frac{1}{4}$ " Bull calves	...	6
$\frac{3}{4}$ " " x $\frac{1}{4}$ " Cows	...	19
$\frac{3}{4}$ " " x $\frac{1}{4}$ " Heifers	...	11
$\frac{3}{4}$ " " x $\frac{1}{4}$ " Heifers calves	...	6
$\frac{3}{4}$ " " x $\frac{1}{2}$ " Bulls	...	1
$\frac{1}{2}$ " " x $\frac{1}{2}$ " Bull calves	...	1
$\frac{1}{2}$ " " x $\frac{1}{2}$ " Cows	...	13
$\frac{1}{2}$ " " x $\frac{1}{2}$ " Heifers	...	0
$\frac{1}{2}$ " " x $\frac{1}{2}$ " Heifer calves	...	2
		76

Horses.

Pure bred French-Canadian Stallions	...	1
" " " " Brood mares	...	2
Native Brood mares	...	2
$\frac{3}{4}$ bred Brood Mares	...	3
Pure bred French-Canadian colt	...	1
$\frac{3}{4}$ bred colts	...	2
Pure bred French-Canadian fillies	...	2
$\frac{3}{4}$ bred fillies	...	1
		14

Donkeys.

Pure bred American Jacks	...	1
$\frac{3}{4}$ bred Jacks	...	1
$\frac{1}{2}$ bred Jacks	...	1
$\frac{7}{8}$ bred Jennies	...	1
$\frac{3}{4}$ bred Janets	...	1
Grade Jennies	...	1
		6

Sheep.

Pure bred Blackhead Persian rams	...	2
" " " " ewes	...	7
Grade ewes	...	8
Grade rams	...	4
Native ewes	...	4
Native rams	...	1
		26

Goats.

British Alpine bucks	...	2
" " does	...	1
Grade does	...	4
Female kids	...	15
Male kids	...	9
		31

Pigs.

Berkshire boars	...	3
" sows	...	2
Gilts	...	1
		6

2.10. ANIMALS SOLD.

Cattle	...	2 cows, 1 heifer, 3 heifer calves, 4 bulls, 3 bull calves, 1 steer.
Mules	...	3.
Goats	...	5 bucks, 3 does.
Sheep	...	11 rams, 5 ewes.
Pigs	...	8 boars, 5 gilts.

2.11. STUD SERVICES.

Canadian stallion	...	9
American jack	...	26
Berkshire boar	...	7

B. Greencastle Nursery & Fruit Farm.

2.12. GENERAL. Work on reviving and increasing the usefulness of this Station was started late in 1952. It soon became evident that there were good prospects of success.

The year 1953 would seem to have proved beyond doubt that, provided it is efficiently operated, it will be self-supporting and will be of great usefulness to the community.

Weather conditions were adverse in the extreme and hand watering had to be carried out over some five acres of nurseries and vegetable gardens. The cost of this was very high and in addition, maximum yields could not be expected. Orchard trees and ornamental trees and shrubs also suffered.

Despite all this, there was a fairly steady output of fruit, vegetables and seedlings from the Station. Expenditure for the year amounted to \$10,752 and revenue to \$8,344 to which should be added \$1,250 worth of coconut seedlings and \$360 worth of economic and ornamental plant seedlings ready for distribution at the end of the year.

2.13. BUILDINGS AND FENCES. Essential repairs to delapidated fences were completed. Water pipes were extended into the vegetable garden area. Two sheds for sheltering labourers were erected on isolated fields and a small room was built adjoining the field office for the purpose of storing and selling fruit and vegetables.

A dwelling house was built for the Curator by the Public Works Department.

2.14. LAND USAGE (approximate acreage).

Mature grafted mangoes	...	3.50 acres
Young " "	...	6.25 "
Mature citrus	...	4.00 "
Other fruit	...	0.50 "
Orchard Expt.	...	0.50 "
Nurseries of ornamental and economic plants	...	3.00 "
Sugar cane	...	2.50 "
Vegetables	...	9.00 "
Vegetable seedlings	...	3.00 "
Tobacco plot	...	0.50 "

During the year, it became increasingly clear that the emphasis of work on the Station should be placed on vegetable garden and nursery work coupled with orchard crops rather than on commercial cane. No land was therefore re cultivated for cane and it is planned in 1954 that the cane area reaped in that year shall be cultivated for vegetables etc. with the exception of a small area of plant canes.

2.15. VEGETABLE GARDEN. Tomatoes, cabbages, carrots, beets, onions, sweet peppers, string and lima beans, lettuce, squash, cucumbers and broccoli were grown with fair success and were very readily sold.

It is worthy of note that a variety of tomatoes—"Scarlet Topper" or "Prichard" produced an excellent crop out of the normal season. Up to the end of June, 0.32 acres yielded 4,300 lbs. or an average of about 6 tons per acre.

Owing to persistent drought however, later plantings more in the usual season did poorly and were attacked severely by Nezara.

Egg plants proved a failure. Kohlrabi grew well but did not find ready market. Owing to a mistake in ordering an unsuitable type of cauliflower seed, this crop was also a failure. It is known however that, with a suitable type of seed, this crop does fairly well at Greencastle. Two acres of yams, one acre of sweet potatoes and one acre of eddoes were all a virtual total loss, while $\frac{1}{2}$ acre of Puerto Rican sweet corn and British Honduras maize yielded very little.

2.16. NURSERIES OF ECONOMIC PLANTS. Attempts at patch budding of Julie mangoes were made but were not successful under the dry conditions which existed. Promising trial is being made with "bottle grafting." Breadfruit cuttings germinated poorly, and of 2,600 coconuts planted from Nevis, only a few were well developed enough for distribution during the year.

About 450 economic trees were distributed during the year consisting of mangoes, citrus, coconuts, avocado pears, guavas, sugar apples, breadfruit and breadnut, soursops, papaws, sapodillas and a few others.

2.17. NURSERIES OF ORNAMENTAL PLANTS. Germination was, generally speaking, poor and the Curator is of the opinion that this may partly be due to chlorination of the water used for irrigation.

2.18. OUTPUT FROM NURSERIES. During the year, the following were sold:—

Vegetable seedlings	...	onions	...	434,000
		tomatoes	...	91,000
		others	...	92,120
Cane plants	...		...	15,800
Ornamental plants	...		...	2,350
Economic plants	...		...	450

2.19. OUTPUT FROM VEGETABLE GARDEN. Detailed figures are not readily available, but over \$3,000 worth of vegetables were sold for the year. These in order of importance were:—

Tomatoes	...	"Scarlet Topper"
Cabbages	...	"Succession"
Carrots	...	"Chantenay"
Beets	...	"Crosby's Egyptian"
Onions	...	"Yellow Bermuda" and "White Bermuda".

Others included broccoli, cauliflower, string and lima beans

2.20. ORCHARDS. Only mangoes yielded a crop during the year. Citrus, the only other crop of which there are a considerable number of trees, was a failure due to drought. The banana plot planted in 1952 was very stunted.

2.21. FINEAPPLES. A small nursery of Antigua Black pine-apples was established. Spraying with ferrous sulphate proved helpful. Growth has been promising to date.

2.22. TOBACCO. Experimental plots of tobacco were grown on the station. The project was financed under Head VII (1) sub-head 17—Field Experimentation. Further details are contained later in the report.

Section III.

CROP INVESTIGATIONS.

3.1. SUGAR CANE. This work is sponsored by the Antigua Sugar Cane Investigation Committee. Hitherto and up to the end of July of this year, the Agricultural Department provided senior supervising staff and to some extent established and maintained nurseries of new varieties. From the beginning of August however, the Committee has assumed full control of the work.

The following are extracts from a report prepared at the end of the reaping season and are presented by the kind permission of the Committee:—

RECOMMENDATIONS FOR MANURING WITH ARTIFICIALS.

Soil Type	Plants		Each Ratoon	
	S.A. (cwt./acre)	Superphos. (cwt./acre)	S.A. (cwt./acre)	Superphos. (cwt./acre)
Wetherill clay	2	1	2	1
Fitches clay	2	1	3	1
Blubber Valley				
Light Loam	3	1	3	1
Gunthorpe clay	2	1	3	1
Tomlinson clay	2	1	2	1
Lindsey clay	2	1	3	1
Otto clay	2	1	3	1
Bendal clay	3	1	3	1
Blubber Valley				
Heavy loam and clay	3	1	3	1

NOTE—Superphosphate is expressed as the 18% water soluble P_2O_5 product.

To ensure maximum gain in yield of plant cane, it is essential for the artificial manures to be applied within a week of planting on Wetherill and Fitches clays, whatever the rainfall.

The artificial manures must be applied within a week of planting on the remaining soil types unless heavy rain waterlogs the soil during this period. In such cases, the artificial manures should be applied three to four weeks after planting.

The artificial manures should be applied to ratoons in the dry season before the rains begin.

If there are good rains in May or April, an extra one cwt. of sulphate of ammonia can be applied during these months to the young plants with advantage.

RECOMMENDATIONS FOR PLANTING (% VARIETIES) IN 1952 AND 1953.

Soil Type	1952.					1953.		
	B3439	B4098	B37161	B41227	B43337	B4098	B41227	B37161
Wetherill clay	—	100	—	—	25	75	—	—
Fitches clay	—	100	—	—	—	100	—	—
Blubber Valley								
Light loam	—	50	25	25	—	50	50	—
Gunthorpe clay	—	100	—	—	—	100	—	—
Tomlinson clay	—	100	—	—	—	100	—	—
Lindsey clay	—	100	—	—	—	100	—	—
Otto clay	—	100	—	—	—	100	—	—
Bendal clay	—	100	—	—	—	100	—	—
Blubber Valley								
heavy loam	—	100	—	—	—	100	—	—
York clay	50	50	—	—	—	100	—	—
Ffryes clay	—	50	50	—	—	50	—	50

Recent experiments however indicate that earlier plantings may be undertaken to advantage as indicated in the following table:

<i>Soil Type.</i>	<i>Month.</i>	<i>Variety.</i>
Fitches clay (wetter areas)	Middle September	B4098
Fitches clay (areas of average rainfall)	Early October	B4098
Blubber Valley Light Loam	Middle October	B4098
Ffryes clay	Late Sept. or Oct.	B37161
*Gunthorpe clay (wetter areas)	Late Sept. or Oct.	B4098
Bendal clay	Late October	B4098

3.2. PINEAPPLES. Plots established at Cades Bay and Christian Valley of Black Antigua pineapples were maintained during the year. The main purpose of these plots is to have available for further trials, a reliable source of planting material. A few fruit have been reaped to date, and numbers and weights are being recorded. This will give some idea of the yields which might be expected under reasonably good farming conditions, and will also indicate to what extent, if any, the fruit are subject to disease.

*Based on results of one experiment only.

The plot at Cades Bay, on a good piece of level land, is in very good condition. Those at Christian Valley however are on thinner soil and are in consequence not so vigorous.

3.3. TOBACCO. Plots of "Harrison Special"—Virginia pipe—"Jamaica Hybrid"—Virginia leaf, Kentucky 16 and Burley 1 were established at Greencastle, the first two also being established at Piccadilly. Great difficulty was encountered in bringing this about owing to the dry weather conditions, and water had to be carried to the field for some time. The plots were however established by late in November, transplanting operations having extended from the middle of October.

Caterpillars were controlled by daily inspection of plants and hand picking.

Topping was done from 20th December.

Despite the trying growing season, satisfactory growth was made particularly at Greencastle, and reaping is planned to commence late in January 1954.

Proposals are in hand for erecting an experimental flue curing barn with the assistance of C. D. & W. funds, but as this could not in any event be completed before the end of 1954, curing of the present crop will be by air.

Section IV.

EXTENSION AND DEVELOPMENT WORK.

4.1. GENERAL. Work continued during the year with no general changes in organisation. The work of the Section continued to increase as more small cultivators on private estates were accorded many of the facilities provided for the Government Settlement areas.

CHANGES IN ORGANISATION TO TAKE PLACE AS FROM 1ST JANUARY 1954—Among the recommendations of Mr. S. A. HAMMOND C.M.G., in his "Report on an Enquiry into the Organisation and Salaries of the Civil Service" are the following:—

"(a) The separate management of the marketing divisions and their complete separation from the Agricultural Department where their turnover is sufficient to justify it."

"(b) The separate management of the land settlements and a clear distinction between field agents for the supervision of land settlements and the extension (teaching) staff of the agricultural departments."

“(c) The limiting of the extension staff of the agricultural departments to the extent to which genuinely competent staff can be recruited.”

These and certain other recommendations not relevant to this report were aimed at reforms so that:—

“the agricultural departments shall be able to fulfil their primary function of improving agriculture by the dissemination of knowledge and skill”.

These and other considerations resulted in proposals being put before the Secretary of State for Reorganisation of the Agricultural Department.

These were approved towards the end of the year, and it is hoped will come into force as from 1st January 1954.

Principal changes will involve the appointment on the one hand of a Peasant Development Officer to be in charge of marketing, land settlements, haulage and cultivation services, loan schemes and other projects, and on the other hand of an Agricultural Superintendent in charge of agricultural stations, research in the field, agricultural instruction, fisheries etc. Both of these sections are to be coordinated under a Director of Agriculture.

A new building to accommodate the Peasant Development Officer and his staff was nearing completion by the end of the year. It is situated along the Kentish Road, and the ground floor will be used as a sales depot.

It is also proposed that the Land Settlement and Development Board shall be abolished as from the end of 1953. This Body must be given full credit for the performance of a very valuable service to the community.

4.2. LAND SETTLEMENTS. Given hereunder is a list of all the “Settlement” areas with which the Agricultural Department and the Land Settlement and Development Board were concerned during the year:—

	<i>Total Acreage.</i>	<i>Total Arable Acreage Occupied.</i>	<i>No of Allot- ments.</i>	<i>Principal Feeder Village or Town.</i>
1. Clare Hall	226	226	126	Clare Hall, St. John's, St. Johnston's Village.
2. Skerrets	100	61	19	St. Johnston's Village.
3. Sawcolts	233	138	70	Sawcolts, Swetes.
4. Wallings	430	134	39	Wallings, Sawcolts.
5. Piccadilly	3,000 (approx.)	853	499	English Harbour, Liberta, Falmouth, Bethesda.

Land Settlement—(cont'd.)

	<i>Total Acreage.</i>	<i>Total Arable Acreage Occupied.</i>	<i>No of Allot- ments.</i>	<i>Principal Feeder Village or Town.</i>
6. Matthews	729	445	165	All Saints, Buckleys, Swetes.
7. Jonas	261	147	108	Freemans, All Saints, Pares.
8. Greencastle (1)	544	491	99	Grays Farm, Grays Hill, Hamiltons, St. John's.
9. The Folly	22	20	22	Swetes, The Folly.
10. Mannings	250	86	51	Freetown, Newfield.
11. Sheriffs	240			
12. Indian Town	22			
13. Coconut Hall	257	160	109	Parham, Seatons.
14. Southern Settlements	1,712	462	269	Old Road, Urlings,
15. Northern Settlements	518	363	283	Cedar Grove, St. John's.
16. Rooms	851	357	298	Willikies, Seatons.
17. Comfort Hall }				
18. Brecknocks	Unsurveyed	51	40	Sawcolts, Hamiltons.
19. Belvedere, Green- castle (2) Etc.	1,635	822	432	Grays Hill, Grays Farm, St. John's.
20. Orange Valley	707	221	131	Crab Hill, Bolans, Johnson's Point.
21. Glanvilles	256	182	124	Seatons.
22. Matthews Extension	35	30	29	Swetes.
23. Christian Valley	679	210	102	Bolans, Jennings.
24. U.S. Base Areas	Unsurveyed	275	133	Cedar Grove, Piggotts.
25. Syndicate Estate				Parham, Pares Village.
Tenantry Areas	3,132	2,055	896	(Widespread)
Total	... 15,839*	7,789	3,944	

NEW AREAS ACQUIRED DURING 1953.

The Tenantry Areas of the Antigua Syndicate Estates Ltd. amounting to over 3,000 acres were purchased by Government towards the end of the year.

4.3. SETTLEMENT BUILDINGS ETC. Settlement buildings were maintained and two large cisterns were repaired. Roads, barricades, culverts and drains were also maintained and repaired.

4.4. TRACTOR PLOUGHING ON SETTLEMENTS. Approximately 320 acres were close-ploughed. Of this area, 260 acres were also banked by tractor-drawn implements.

4.5. SETTLEMENT COMMITTEES. These Committees continued to function in an advisory capacity. Nine general and twenty-eight Committee meetings were held during the year.

*Not including unsurveyed areas.

4.6. U. S. BASE AREAS (former). Survey work and allocation of plots were continued.

4.7. SOIL AND WATER CONSERVATION. A total of 523 acres were contoured during the year by the department's mobile Soil Conservation Unit as follows:—

Settlement areas	352 acres
Friar's Hill	9 "
Sugar Estates	60 "
Peasants off settlements	102 "
	523 "

4.8. MOBILE CINEMA UNIT. Over 50 shows were given during the year.

4.9. ESTATE AGRICULTURE. Liaison between the Agricultural Department and most of the estates of the island through the Sugar Cane Investigation Committee (for part of the year) the Antigua Cotton Growers Association and the Agricultural and Commercial Society, was maintained.

4.10. FOREST CONSERVATION. A forestry protection service was maintained during the year. Full control is extremely difficult and will continue to be so as long as popular public opinion does not give it its full support. Nevertheless, forestry officers and rangers have been continually bringing charges against offenders and their action must have resulted in reduction in the amount of unsuitable land being cleared. It is hoped that when the proposed Land Utilisation Survey is completed, it will be possible, by means of more precise definition of areas unsuitable for clearing, to maintain better control than hitherto.

There were 18 convictions during the year for breaches of forestry regulations. Fines varying from \$5.00 to \$10.00 were imposed.

4.11. COTTON PROTECTION. This work is carried on by the same staff as are responsible for Forestry Conservation. The close season was in force from 1st May to 15th August.

There were 52 convictions during the year for breaches of the cotton protection ordinance. Fines varied from \$1.20 to \$5.00.

A large amount of "Wild Cotton" was destroyed by labour gangs under the direction and supervision of the Protection Officers.

4.12. **PLANT NURSERIES.** In addition to nurseries at Friar's Hill and Greencastle, cane nurseries were maintained at Matthews, Cades Bay and Orange Valley.

The pineapple nursery and observation plot was maintained at Cades Bay and two small plots were also established at Christian Valley.

Vegetable seedlings were also grown for distribution at Cades Bay and Piccadilly.

4.13. **BOARDS, COMMITTEES, CONFERENCES.** During the year the Agricultural Superintendent served on the following:—

1. As Chairman of the Land Settlement and Development Board.
2. As Secretary of the Antigua Agricultural and Commercial Society.
3. As Chairman of Sugar Cess Rehabilitation Fund Committee.
4. As Secretary-Treasurer of the Antigua Cotton Growers Association.
5. Investigation Committee (for part of the year).

For a part of the year the Agricultural Assistant (Credit) served as a member of the Industrial Development Board. The Agricultural Assistant (Land Settlements) served as a member of the Antigua Sugar Association and of the Small Farmers Cultivation and Haulage Board.

The Agricultural Superintendent attended the following meetings outside of the Colony during the year:—

1. International Congress of Sugar Cane Technologists held in the British West Indies. (Barbados and Trinidad sessions).
2. The Provisional Governing Body of the Eastern Caribbean Farm Institute. Held in Trinidad.
3. The Advisory Committee of the Sugar Cane Breeding Station. Held in Barbados.
4. The B.W.I. Advisory Council on Agriculture, Animal Health, Forestry and Fisheries. Held in Barbados.

SECTION V

MARKETING AND CREDIT

5.1. GENERAL. The following table shows the total volume of business done by this section and the large increases which have taken place in recent years:—

1948—1953.

Financial Summary.
(\$'000s)

	1948.	1949.	1950.	1951.	1952.	1953.
Loans issued under Head VII ...	24	54	116	155	298	330
Loans and Interest recovered						
including C. D. & W. Schemes	14	34	70	109	167	264
Cane Payments (Head VII (3) (4)-)	96	163	240	254	372	476
Cotton Payments (Head VII (3) (3))	15	227	510	574	502	186
Government Marketing Depot turnover ...	6	15	12	12	35	24
Packing Materials store purchased	—	—	5	4	7	—
Marketing Commission & Fees received ...	4	20	33	37	38	23
Rents collected ...	5	7	12	10	14	14

5.2. Credit. The section, on the recommendation of field officers of the department, continued to provide credit facilities for the small farmer under the same terms and conditions as in the previous year. Since 1951, the service has been extended to include all peasants, the various landlords having first given an undertaking to collect loans on behalf of Government.

During the year, a total of \$330,503.51 was issued to 5,898 applicants.

Interest at half cent. per dollar per month collected during the year amounted to \$10,504.14.

<i>Year</i>	<i>Amount in Dollars</i>	<i>No. of Loans Issued</i>	<i>No. per Instructor</i>
1942	2,352	Not known	—
1943	3,384	336	—
1944	5,539	Not known	—
1945	9,252	Not known	—
1946	24,465	853	122
1947	42,456	1,317	188
1948	28,193	1,897	271
1949	53,455	3,276	467
1950	120,922	3,980	442
1951	154,707	4,645	516
1952	298,226	6,686	743
1953	330,503	5,898	655

5.3. CANE. The following tables show the tonnages of cane dealt with by the section since 1949 and also details of tonnages dealt with in 1953.

1953.		<i>Year</i>	<i>Tonnage</i>	
		1949	19,011	
		1950	28,816	
		1951	24,857	
		1952	35,185	
		1953	36,929	
		1953 CROP.		
<i>Settlement</i>		<i>Tonnage</i>	<i>Gross Proceeds</i>	<i>\$</i>
Belvedere	...	6849.5044	100,645.24	
Cades Bay	...	960.2930	14,334.84	
Clare Hall	...	2385.9270	33,011.24	
Coconut Hall	...	1179.4608	16,909.11	
Glanvilles	...	1811.7173	25,395.72	
Golden Grove	...	2376.3811	29,874.38	
Greencastle	...	4586.4546	66,012.80	
Jonas	...	1615.4241	22,831.13	
Marble Hill & McKinnons	...	3763.8179	51,383.96	
Mill Hill & Follies	...	239.1012	3,392.20	
Mannings	...	232.5500	2,155.74	
Matthews	...	2676.5493	37,978.75	
Orange Valley	...	1516.8439	21,788.52	
Piccadilly (Red Hill)	...	875.9934	11,031.45	
Rooms and Comfort Hall	...	2264.4364	30,624.91	
Sawcolts	...	594.2751	8,252.52	
Totals	...	36928.7295	475,622.51	

5.4. STATEMENT OF MARKETING OFFICE TRADING ACCOUNT. 1953.

	Expenditure during the year plus stock in hand at the beginning of the year.	Revenue during the year plus stock in hand as at the end of the year.	Surplus.	Deficit.
	\$	\$	\$	\$
Cotton	187,889.07	187,275.17	—	(a) 613.90
Cane	478,759.60	475,623.17	—	(a) 3136.40
Fruit & Vegetables	6,366.66	6,464.54	97.88	—
Seeds	3,800.54	4,415.92	615.38	—
Insecticides & Fertilizers	31,776.74	32,760.63	983.89	—
Packing Materials	10,885.85	11,456.01	570.16	—
Totals	719,478.46	717,995.44 (b)	2,267.31 (b)	3750.30

(a) Due to insertion of unpaid vouchers on Expenditure side for the first time many of which have been outstanding for years and have thus inflated the sum shown as profits on previous annual statements.

(b) Does not include Marketing commission.

MARKETING COMMISSION—1953.

Cane	...	11,890.56
Cotton	...	9,363.76
Insecticides & Fertilizers	...	564.00
Fruit and Vegetables	...	279.50
Seeds	...	212.44
Total	...	<u>22,310.26</u>

Section VI.

FISHERIES

6.1. GENERAL. Advised and assisted by Dr. Hickling, a C.D. & W. scheme for Fisheries development in Antigua was prepared. Under this scheme (No. D. 1880), a fisheries officer was appointed in February of this year.

This officer was charged with the duty of making preliminary investigations into the problems connected with fisheries in Antigua, and provision was made under the scheme for his preliminary training in other West Indian islands in addition to provision for purchase of literature and simple equipment.

6.2. VISIT OF FISHERIES OFFICER TO BARBADOS. Methods of catching flying fish were studied in detail and the fisheries officer was given the opportunity of gaining first-hand experience in modern methods of fisheries investigation in general.

Our thanks are due to the Barbados Government and especially to the Fisheries Officer Mr. Wiles, for making his visit a success.

6.3. VISIT TO ANTIGUA OF FISHERIES OFFICER, WINDWARD ISLANDS. In July, the fisheries officer of the Windward Islands visited Antigua and Barbuda with a view to offering advice on the development of fisheries.

As a result of this visit, a further C. D. & W. scheme (No. D. 2081) was submitted and approved.

This scheme provides for investigation in catching of flying fish, the development of a fish market, the compilation of statistics, demonstration of improved fishing methods, purchase of ice boxes, publicity and some small items.

Work was started on this scheme this year, and arrangements were made with Barbados for the loan of two fishermen skilled in methods of catching flying fish. It is hoped that these men will arrive in Antigua during the flying fish season of 1954.

6.4. SLOOP "DAISYLYN". A government confiscated sloop was taken over and repairs were started with a view to using it for experiments and demonstrations in fishing methods. A marine engine of the Maritime Province type was ordered for it.

6.5. FISHERIES COMMITTEE. A fisheries committee was formed during the year and meetings were held in several areas around the island with the idea of organising fishermen into a body. Registration was introduced, and in due course it is proposed to make certain facilities such as credit, available to such registered fishermen.

6.6. TILAPIA. These fresh water fish were extended to some forty additional areas during the year, including the "Country Ponds" with permission of the City Commissioners. Drought conditions have however reduced the value of this work.

6.7. UNIVERSITY OF MARINE BIOLOGY OF MIAMI. Research was carried out for the above university. Wood panels were supplied for the purpose of collecting marine fungi.

6.8. FISH MARKET AND COLD STORAGE. Arrangements were made to convert the existing Marketing Depot building into a properly equipped fish market.

Arrangements were also made with the Electric Light Company for the use of a suitable room and it is hoped that deep freeze equipment will also be installed.

Section VII.

COLONIAL DEVELOPMENT & WELFARE SCHEMES

7.1. D.1374—SERVICES TO SMALL FARMERS. This scheme makes provision for the maintenance of services to Small Farmers including instructional and supervisory staff on settlement areas.

Expenditure under this scheme during the year amounted to \$45,336.74. The full amount of the scheme is \$229,200.00.

It is proposed that this scheme shall be terminated at the end of this year, and it is planned that the work and services shall be carried on and financed from the local budget under the control of the proposed Peasant Development Officer.

7.2. D. 1701—LAND UTILISATION SURVEY. This scheme provides for the conducting of a Land Utilisation Survey. As in 1952, only small expenditure was incurred under the scheme during the year since the preliminary work consists of the preparation of large-scale maps by Dr. Callow of the World Land Use Organisation in England.

The maps are to be prepared from aerial photographs which were taken by the U.S. Air Force in 1941. As soon as these maps are received, it is hoped that we will be able to proceed with the necessary field work.

Expenditure during 1953 amounted only to \$13.08. The full amount of the scheme is \$21,768.00.

7.3. D. 1889—FISHERIES OFFICER. This scheme provides for the appointment of a Fisheries Officer, for his training and for sufficient equipment to enable him to make preliminary investigations into fisheries problems in the Presidency.

Expenditure under the scheme for the year amounted to \$2,799.69. The full amount of the scheme is \$7,200.00.

7.4. D. 2005—ACQUISITION A. S. E. TENANTRY AREAS. All of the tenantry areas of the Antigua Syndicate Estates Ltd. were purchased by mutual consent. They will be administered by the proposed Peasant Development Officer.

Expenditure under this scheme amounted during the year to \$53,728.97. The full amount of the scheme is \$72,000.00.

7.5. D. 2081—FISHERIES DEVELOPMENT. This scheme provides for an extension of activities under control of the fisheries officer. It was approved late in the year and expenditure amounted to only \$1,619.10. The full amount of the scheme is \$11,832.00.

Section VIII.

LEGISLATION AFFECTING THE AGRICULTURAL DEPARTMENT

The following legislation affecting the Agricultural Department was enacted during 1953:—

1. Ordinance No. 1 of 1953. An Ordinance to amend the Fisheries Ordinance, 1935, (No. 10 of 1935).
2. Ordinance No. 3 of 1953. An Ordinance to control the importation of animals, birds, reptiles and insects, and to regulate the treatment and disposal of animals which are suffering or are suspected to be suffering from any disease, and for other matters related thereto or connected therewith.

3. Ordinance No. 6 of 1953. An Ordinance to make provision for raising a loan for an amount of one hundred and sixty-three thousand six hundred dollars for the purpose of financing in part the acquisition of certain lands in the Presidency rented by peasant farmers.
4. Ordinance No. 14 of 1953. An Ordinance to repeal the Land Settlement and Development Board Ordinance, 1946, and to make provision in respect of the properties, rights and liabilities of the Board established by that Ordinance.
5. S. R. & O. No. 2 of 1953. Proclamation dated March 4, 1953, bringing into operation the Agricultural Small Holdings (Regulation of Rentals) Ordinance, 1952 (No. 19 of 1952).
6. S. R. & O. No. 6 of 1953. Proclamation dated April 1, 1953, bringing into operation the Animals (Diseases and Importation) Ordinance, 1953 (No. 3 of 1953).
7. S. R. & O. No. 7 of 1953. Proclamation dated April 9, 1953, declaring a close season for cotton.
8. S. R. & O. No. 14 of 1953. The Animals (Importation) Control Regulations, 1953, dated June 23, 1953, made by the Governor in Council under section 14 of the Animals (Diseases and Importation) Ordinance, 1953 (No. 3 of 1953).
9. S. R. & O. No. 19 of 1953. Proclamation dated August 27, 1953, declaring a close planting season for cotton.
10. S. R. & O. No. 21 of 1953. Proclamation dated September 22, 1953, varying proclamation dated 27th August, 1953 declaring a close planting season.
11. S. R. & O. No. 23 of 1953. Proclamation dated October 13, 1953, varying further a proclamation dated 27th August, 1953, declaring a close planting season for cotton.

E. R. H. MARTIN,
Agricultural Superintendent.

APPENDIX I

ANTIGUA AVERAGE RAINFALL 1874- 1932

<i>Year</i>	<i>Inches</i>	<i>Year</i>	<i>Inches</i>
1874	31.16	1904	37.01
1875	28.78	1905	31.40
1876	41.98	1906	53.93
1877	49.05	1907	43.45
1878	47.11	1908	43.79
1879	61.54	1909	45.15
1880	49.68	1910	34.77
1881	53.75	1911	36.47
1882	33.04	1912	32.20
1883	55.51	1913	42.76
1884	43.98	1914	36.86
1885	43.39	1915	56.14
1886	47.78	1916	58.23
1887	43.68	1917	36.62
1888	44.23	1918	37.87
1889	73.59	1919	49.56
1890	33.00	1920	30.09
1891	50.01	1921	30.32
1892	38.43	1922	35.14
1893	38.69	1923	32.41
1894	38.85	1924	41.57
1895	52.91	1925	30.75
1896	59.85	1926	50.20
1897	39.67	1927	45.84
1898	48.85	1928	33.24
1899	47.50	1929	40.78
1900	36.95	1930	25.51
1901	57.61	1931	48.62
1902	58.80	1932	58.47
1903	43.68		

AVERAGE 43.60 ins.

APPENDIX II. Mean Monthly Rainfall in Antigua 1933-1953.

No. of Stations.	Year	Jan.	Feb.	March.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
59	1933	1.98	.92	1.07	2.62	4.69	2.60	5.28	1.87	8.40	3.04	6.18	2.85	41.50
60	1934	1.56	.64	2.05	.61	1.11	3.51	2.81	7.42	3.90	1.62	10.74	5.89	41.86
60	1935	1.33	1.15	.96	1.96	2.98	2.41	4.35	3.24	4.35	8.70	5.65	2.12	38.31
60	1936	1.65	1.26	.93	2.84	8.44	3.61	5.92	5.36	10.15	8.14	4.41	7.23	59.94
60	1937	8.54	3.07	.79	4.39	1.22	1.03	3.86	5.15	4.99	3.47	8.13	2.64	48.28
58	1938	2.07	.81	1.20	.61	1.06	11.58	3.10	6.39	3.00	3.95	8.41	2.67	44.75
59	1939	1.64	1.11	1.72	.25	.91	1.06	3.00	1.29	1.86	9.42	5.52	1.92	29.70
66	1940	3.41	3.09	2.13	2.41	4.31	2.71	2.15	3.04	3.04	2.41	6.79	1.88	37.37
66	1941	3.10	.71	1.63	2.10	12.77	3.49	3.02	4.07	5.25	2.95	8.06	2.22	49.37
56	1942	5.61	1.76	.55	4.43	2.62	4.45	3.39	6.57	2.67	4.53	10.56	2.81	49.95
54	1943	3.99	1.91	1.63	1.01	7.70	5.44	1.96	6.84	3.40	8.69	4.17	2.34	49.08
54	1944	2.99	1.32	.39	.55	2.83	3.84	6.46	4.53	4.40	5.69	3.48	1.55	37.13
55	1945	1.40	2.44	1.44	1.59	3.97	2.42	3.38	4.62	6.57	7.59	1.88	3.60	40.90
51	1946	2.12	1.09	1.93	4.53	3.21	1.97	1.32	3.76	5.29	2.32	4.68	4.89	37.11
49	1947	3.62	.50	.61	.94	3.77	1.50	2.57	1.68	7.42	4.46	1.00	.76	28.84
48	1948	2.44	.93	1.51	.90	2.55	3.98	1.86	2.28	4.64	7.02	5.28	3.92	36.41
48	1949	1.73	2.40	4.42	3.11	1.45	3.09	3.46	3.37	12.31	6.28	3.35	3.78	49.03
40	1950	5.89	2.58	1.30	2.25	1.74	1.56	1.63	11.23	4.56	7.38	5.07	2.88	46.07
41	1951	3.83	2.34	1.11	2.42	9.46	2.84	3.54	7.88	10.51	5.16	3.62	6.42	59.13
40	1952	2.95	1.72	2.90	3.22	5.11	4.74	5.96	8.39	6.46	5.45	7.02	1.34	55.26
43	1953	1.45	.94	3.10	1.74	1.31	.93	3.09	1.68	3.13	1.34	6.43	3.15	28.29
Monthly means 1933-1953 ...		2.96	1.52	1.55	2.12	3.93	3.24	3.43	4.82	5.52	5.22	5.75	3.18	43.24

APPENDIX III

PROGRESSIVE MONTHLY AVERAGE RAINFALL IN ANTIGUA FOR THE YEARS

1933-1955

Month	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
January	...	1.98	1.56	1.33	1.65	8.54	2.07	1.64	3.41	3.10	5.61	2.09	1.40
February	...	2.90	2.20	2.48	2.91	11.61	2.88	2.75	6.50	3.81	7.37	3.41	3.84
March	...	3.97	4.25	3.44	3.85	12.40	4.08	4.47	8.63	5.44	7.92	3.80	5.28
April	...	6.59	4.86	5.40	6.09	16.79	4.59	4.72	11.04	7.54	12.35	4.35	6.87
May	...	11.26	5.97	7.48	15.14	18.01	5.65	5.63	15.35	20.31	14.97	7.18	10.84
June	...	13.88	9.48	9.81	18.75	19.04	17.23	6.69	18.06	23.80	19.42	11.02	13.26
July	...	19.16	12.29	14.25	24.67	22.90	20.33	9.69	20.21	26.82	22.81	17.48	16.64
August	...	21.03	19.71	17.19	30.04	28.05	26.72	16.98	23.25	30.89	29.38	22.01	21.26
September	...	29.43	23.67	21.81	40.19	33.04	29.72	12.84	26.29	36.14	32.05	26.41	27.83
October	...	32.47	25.23	30.51	48.33	36.51	33.67	22.26	28.70	39.09	36.58	32.10	35.42
November	...	38.63	35.97	36.19	52.74	44.64	42.03	27.58	35.49	47.15	46.74	35.58	37.30
December	...	41.50	41.86	38.31	59.98	47.28	44.75	29.70	37.37	49.37	49.95	37.15	40.90

APPENDIX III—(cont'd)

PROGRESSIVE MONTHLY AVERAGE RAINFALL IN ANTIGUA FOR THE YEARS											
Month.	1933—1953										
	1946.	1947.	1948.	1949.	1950.	1951.	1952.	1953.	Average 1933—1953.		
January	2.12	3.26	2.44	1.73	5.89	3.83	2.95	1.45	2.97		
February	3.21	4.12	3.37	4.13	8.47	6.17	4.67	2.39	4.53		
March	5.14	4.73	4.88	5.55	9.17	7.28	7.57	5.49	6.09		
April	9.67	5.67	5.78	11.66	12.02	9.70	10.79	7.23	8.23		
May	12.88	9.44	8.33	13.11	13.76	19.16	15.90	8.54	12.15		
June	14.75	10.94	11.41	16.20	15.32	22.00	20.64	9.47	15.38		
July	16.17	13.51	13.27	19.66	16.95	25.54	26.60	12.56	18.82		
August	19.93	15.19	15.55	23.33	24.18	33.42	34.99	14.24	23.62		
September	25.22	22.61	20.19	35.64	32.68	43.93	41.45	17.37	29.16		
October	27.54	27.07	27.21	41.92	40.06	19.09	46.90	18.71	34.38		
November	32.22	28.08	32.19	45.27	45.13	52.71	53.92	25.14	40.11		
December	37.11	28.84	36.41	40.05	48.01	59.13	55.26	28.29	43.30		

Notes.— 1. The figures are not monthly means but are progressive from January to December.

RAINFALL IN ANTIGUA--1953.

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No	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
1.	Antigua Sugar Factory	1.85	1.57	3.77	2.85	2.19	1.50	4.26	2.61	4.82	2.54	10.48	4.17	42.41
2.	Pettys Hope	1.55	1.00	3.01	.18	1.53	1.10	3.75	1.07	3.22	1.48	8.50	3.21	30.00
3.	Blackmans	1.23	.97	3.08	2.90	1.01	.73	2.97	2.20	3.39	1.30	7.02	2.68	30.08
4.	Blakes	.89	.38	2.55	2.17	1.20	.92	2.75	1.02	3.44	.59	6.61	4.15	26.67
5.	Blubber Valley	1.27	.74	3.56	2.34	.56	1.48	2.09	1.91	3.21	1.94	3.93	3.20	27.13
6.	Burkes	1.55	.73	3.31	.57	1.48	1.07	3.64	1.20	3.13	1.34	8.03	3.69	29.74
7.	Casasada Garden	2.01	1.51	5.65	2.07	.90	.23	2.45	2.31	2.72	.35	6.36	1.67	28.23
8.	Cedar Valley	1.42	1.12	3.85	2.58	.92	.63	2.86	2.68	3.17	.74	5.55	2.38	27.90
9.	Collins	1.40	.48	2.50	.50	1.50	.67	3.02	1.52	2.71	1.73	7.81	2.31	26.15
10.	Comfort Hall	1.38	1.11	1.91	.77	2.84	1.01	2.72	1.39	3.01	2.53	8.08	2.27	29.02
11.	The Cotton	1.47	.27	1.72	.75	.87	.00	3.55	1.46	3.49	1.87	6.77	2.71	24.93
12.	Cotton Station	1.40	1.30	5.37	1.41	.83	.93	2.11	2.61	2.56	1.02	5.80	3.24	28.58
13.	Country Board of Health	1.70	.88	4.37	2.52	1.57	1.25	3.45	2.52	3.05	1.13	4.39	3.22	29.06
14.	Creek Side	1.95	1.74	3.13	1.68	.65	.86	4.57	2.54	2.88	1.51	6.08	3.81	31.40
15.	Delaps	1.43	1.43	3.63	2.48	2.38	1.02	3.60	1.61	3.38	2.22	7.93	4.75	35.86
16.	Diamonds	1.72	.53	3.63	1.91	1.34	1.11	4.75	1.31	4.32	.96	8.77	3.18	33.53
17.	Donovans	1.13	.67	3.14	.81	1.40	.96	3.61	1.78	4.39	2.28	7.46	2.49	30.32
18.	Five Islands	1.73	.40	2.89	2.06	.72	1.72	2.10	.60	1.40	1.69	2.58	2.84	20.73
19.	Fitches Creek	1.72	1.12	3.33	3.94	1.30	.75	3.01	2.57	4.86	.74	10.70	3.30	37.73
20.	Frars Hill	1.93	1.02	5.60	2.06	1.50	1.31	3.20	3.15	2.10	.85	5.24	8.41	31.37
21.	Gavorns	.73	.68	2.26	1.55	1.57	.90	3.52	.97	3.37	1.79	7.10	2.78	27.22
22.	Gilberts	.98	.46	2.20	.64	1.30	.27	2.39	1.67	2.79	1.38	6.18	2.68	22.94
23.	Greencastle	2.52	1.14	3.51	2.27	1.58	1.10	3.52	1.95	2.71	2.28	8.88	4.16	35.62
24.	Hodges Bay	1.33	.97	1.87	.69	1.42	.62	1.89	1.51	4.33	1.49	4.78	3.49	24.39
25.	Langfords	1.33	.77	3.46	2.08	.87	1.72	2.53	1.70	3.99	1.09	7.61	2.73	29.88
26.	Long Lane	1.23	.96	3.20	2.35	1.57	.81	4.43	1.42	3.74	1.47	7.07	3.05	31.30
27.	Montpelier	1.58	1.74	3.57	4.03	1.98	1.18	5.46	1.52	3.99	1.25	5.65	3.63	35.58
28.	Morris Loohys	1.41	1.66	3.16	.29	1.76	.55	3.05	1.28	2.55	.60	6.21	3.15	25.67

APPENDIX IV—(cont'd)
RAINFALL IN ANTIGUA—1953.

No	Station.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.
29.	New Division	1.09	1.07	1.35	1.22	1.32	.37	.14	.31	.18	.49	10.32	3.89	21.75
30.	North Sound	1.91	.85	3.34	1.01	1.75	1.40	4.63	1.59	4.31	1.66	5.90	3.05	31.40
31.	Pares & Cockranes	1.29	.89	2.96	1.37	1.08	1.04	3.72	1.18	3.62	.97	.30	2.75	28.17
32.	Parham Lodge	.68	.39	1.96	.37	.77	1.02	2.68	1.86	4.30	2.25	5.87	2.54	25.19
33.	Parham New Works	1.80	1.30	3.66	1.95	2.00	1.57	3.20	1.85	3.50	.58	6.40	3.55	30.36
34.	Payaters	1.63	.69	2.80	2.67	1.53	.73	3.12	1.39	1.05	.25	8.34	1.83	26.03
35.	Piccadilly	2.27	1.34	3.33	2.50	1.40	1.26	4.23	1.89	3.93	2.02	5.51	3.97	33.65
36.	Thibous	1.38	.10	2.15	.56	1.34	.71	2.19	1.74	4.26	.95	4.85	3.58	23.81
37.	Vernons	1.15	2.10	1.65	1.91	1.57	1.17	3.64	2.04	4.88	1.15	4.96	2.08	28.30
38.	Willis Freemans	1.58	.77	3.46	.70	1.10	.98	3.32	1.16	2.99	1.13	7.81	2.98	28.01
39.	Wallings Station	1.07	.26	2.56	1.07	.00	.00	.00	1.16	.53	.67	1.96	3.71	12.99
40.	Wallings Dam	1.35	.23	2.55	1.22	.00	.00	.00	1.90	.46	.62	1.76	3.84	13.93
41.	Yeptons	1.64	.67	3.50	3.13	1.16	.79	2.98	1.71	1.91	1.21	3.21	3.18	25.09
42.	Yorks	1.31	.94	2.84	2.01	.54	1.17	3.12	1.28	2.17	1.32	4.15	2.83	24.88
43.	Lyons	1.18	1.22	2.20	1.84	1.55	1.30	3.94	1.15	3.30	1.17	7.64	3.43	29.92
Totals (43 Stations)		62.17	40.27	133.54	74.78	56.15	39.91	132.75	72.29	134.72	57.83	276.55	135.56	1216.53
Means (43 Stations)		1.45	.94	3.10	1.74	1.31	.93	3.09	1.68	3.13	1.34	6.43	3.15	28.29
Means 1933—1953		2.96	1.52	1.55	2.12	3.93	3.24	3.43	4.82	5.52	5.22	5.75	3.18	43.24
Barbuda (Codringtons)		.65	.28	.96	3.22	.70	2.85	4.85	.91	5.61	2.29	1.76	1.17	34.75

APPENDIX V

SUGAR PRODUCTION—ANTIGUA

Year	Acres Reaped	Tons (Long) Grey Crystals	Tons (Long) Muscovado	Average yield Tons Cane per acre	Tons Cane per ton Sugar	Tons Sugar per acre
1941	11,374	17,584	166	12.9	8.23	1.55
1942	11,703	21,979	193	16.5	8.71	1.89
1943	9,187	21,867	208	18.7	7.79	2.39
1944	8,525	16,279	125	14.3	7.47	1.92
1945	8,823	20,663	72	16.8	7.15	2.35
1946	9,560	26,024	122	20.7	7.57	2.73
1947	10,267	22,746	100	17.5	7.87	2.22
1948	8,782	12,174		11.5	8.32	1.38
1949	8,494	18,263	75	18.2	8.43	2.15
1950	11,800	30,681	422	21.3	7.88	2.64
1951	9,960	18,511	397	17.4	9.20	1.90
1952	12,422	33,684	562	23.9	8.64	2.75
1953	12,650	31,588	530	19.5	6.76	2.52

